

AMENDMENT TO THE CLAIMS

Claims 1-39 (canceled)

Claims 40-43 (canceled)

Claims 44-246 (canceled)

Claimed 247-257 (canceled)

258. (new) A memory element, comprising:
a first dielectric material having an opening;
a conductive material lining the sidewall surface of said opening;
a second dielectric material formed over said conductive material within said opening; and
a programmable resistance material electrically coupled to a top surface of said conductive material.

259. (new) The memory element of claim 258, wherein said conductive material is at least one conductive sidewall spacer.

260. (new) The memory element of claim 258, wherein said conductive material is formed over only a portion of the bottom surface of said opening.

261. (new) The memory element of claim 258, wherein said opening is a trench.

262. (new) The memory element of claim 258, wherein said opening is a hole.

263. (new) The memory element of claim 258, wherein said conductive material comprises at least one material selected from the group consisting of titanium nitride, titanium aluminum nitride, titanium carbonitride, titanium silicon nitride, carbon, N- doped polysilicon, titanium tungsten, tungsten silicide, tungsten, molybdenum, N+ doped polysilicon.

264. (new) The memory element of claim 258, wherein said programmable resistance material includes a phase change material.

265. (new) The memory element of claim 258, wherein said programmable resistance material includes a chalcogen element.

266. (new) The memory element of claim 258, wherein said top surface is a top edge of said conductive material.

267. (new) The memory element of claim 258, wherein said conductive material includes one or more protruding portions extending toward said programmable resistance material.

268. (new) The memory element of claim 258, wherein said first dielectric material and said second dielectric material are formed of the same material.

269. (new) A memory element, comprising:

a conductive sidewall spacer between a first dielectric material and a second dielectric material; and

a programmable resistance material in electrical communication with said conductive sidewall spacer.

270. (new) The memory element of claim 269, wherein said programmable resistance material is electrically coupled to a top surface of said conductive sidewall spacer.

271. (new) The memory element of claim 269, wherein said first dielectric material and said second dielectric material are formed of the same material.

272. (new) The memory element of claim 270, wherein said top surface is an annulus.

273. (new) The memory element of claim 269, wherein said conductive sidewall spacer includes a protruding portion extending toward said programmable resistance material.

274. (new) The memory element of claim 269, wherein said programmable resistance material is a phase-change material.

275. (new) The memory element of claim 269, wherein said programmable resistance material is a chalcogen material.